BRUHAT BENGALURU MAHANAGARA PALIKE

NAME OF WORK :

PROVIDING DRINKING WATER FACILITIES IN RAMBHOVI COLONY, KHATHANAGAR AND SURROUNDING AREAS IN WARD NO 16 JALAHALLI.

Sl. No.	PARTICULARS	Total Cost in Rupees.
1	WATER SUPPLY LINE WORKS	3790000
2	DRILLING OF BOREWELL, PUMP / MOTOR ERECTION, ELECTRIFICATION WORKS - 4 no's	2450000
	SUB-TOTAL	6240000
	Add KRIDL Charges @ 11%	686400
	Add PMC Charges @ 1%	62400
	Miscellaneous	11200
	TOTAL	7000000

RUPEES SEVENTY LAKHS ONLY

Assistant Engineer
Ward-16
BBMP

Executive Engineer
RRN Division
BBMP

Assistant Executive Engineer
Yeshwanthpur Sub-Division
BBMP

ನಂ.: 132 ದಿನಾಂಕ: 20/2/2018

ರೂ. 70,00000/- (Seventy lakhs only)

ಮೇಲಿನ ಕಾಮಗಾರಿಗೆ ಆಡಳಿತಾತ್ಮಕ ಮಂಜೂರಾತಿ ನೀಡಿದೆ.

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ರಾಜರಾಜೇಶ್ವರಿ ನಗರ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-72

TECHNICAL SANCTION

Rs: 70,00,000/- (Rs seventy lakhs only) is accorded under the head: P-1771 PW -16-17

By CE (R.R.N.) 488/17-18

Registered as CE (R.R.N) No: 120-121 subject to conditions contained in enclosed memo No: 488/17-18 Date: 20/2/18

TA, CE (R.R.N.)

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BRUHAT BENGALURU MAHANAGARA PALIKE

NAME OF THE WORK:

PROVIDING DRINKING WATER FACILITIES IN RAMBHOVI COLONY, KHATHANAGAR AND SURROUNDING AREAS IN WARD NO 16 JALAHALLI

Head of Account :

Est. Amt. Rs.37.90 Lakhs

Sl. No	Description of Item	Unit	No	L	B	D	QTY	Rate	AMT
1	Earthwork in surface excavation in Hard soil for levelling and lowering the ground manually (other than foundation of buildings, culverts, road drains and trenches of pipe lines and cables) and removing the excavated stuff to a distance not exceeding 50m and lift upto 1.5m, excavated surface levelled and neatly dressed, disposed earth to be levelled after breaking of clods and neatly dressed as per specifications. (P.5/2.2 2016-17 BLORE CIRCLE PWD SR)							Cum	
	50mm Dia Main Lines								
	Rambhovi Colony & Khathanagara								
	Rambhovi Colony		lines						
	1st main		2	75.00			150.00		
			2	25.00			50.00		
	1st cross		2	65.00			130.00		
	2nd cross		2	150.00			300.00		
	3rd cross		2	105.00			210.00		
	4th cross		2	80.00			160.00		
	Maneshwara road		2	47.00			94.00		
	5th cross		2	142.00			284.00		
	Colony main		1	70.00			70.00		
	Colony cross		2	72.00			144.00		
			2	63.00			126.00		
			1	70.00			70.00		
			1	65.00			65.00		
	2nd A main		2	195.00			390.00		
	7th cross		2	125.00			250.00		
	8th B cross		2	110.00			220.00		
	1st main BWSSB office		2	50.00			100.00		
	T shape cross		1	72.00			72.00		
	Khathanagara								
	1st main Water plant road		1	168.00			168.00		
	2nd main Gurudwara road		1	150.00			150.00		
	3rd main to Airforce qrtrs		1	255.00			255.00		
	Cross roads		1	180.00			180.00		
			1	170.00			170.00		
			1	140.00			140.00		
	Total Length - mtrs						3948.00		
	Total Qty		1	3948.00	0.75	0.30	888.30		
	Consider 50% Qty						1974.00	258.85	510974
	Basic Rate	220.00							
	Adhoc % as per 2017-18 SR	24.20							
		244.20							
	Area Weightage @ 6%	14.65							
	Total Rate	258.85							
2	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m after breaking of clods complete as per specifications. (P.5/2.4 2016-17 BLORE CIRCLE PWD SR)							Cum	
	50mm Dia Main Lines - 2 lines each road		1	3948.00	0.30	0.60	710.64		
	32mm Dia Distribution Lines								

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Sl. No.	Description of Item	Unit	No	L	B	D	QTY	Rate	AMT
	Proposed Distribution Line 32mm Dia line - Each House Connection		494	1.50	0.30	0.60	133.25		
	Basic Rate	283.00					843.89	332.98	280997
	Adhoc % as per 2017-18 SR	31.13							
		314.13							
	Area Weightage @ 6%	18.85							
	Total Rate	332.98							
3	**Cutting of road surface for pipeline trenches** and disposing of the excavated stuff as directed including barricading, danger lighting etc., in the **Cement concrete road. (P.264/37.40 2016-17 BLORE CIRCLE PWD SR)**							Cum	
	30% Pipe length of Item no.2		1	1184.40	0.30	0.15	53.30	714.20	38065
	Basic Rate	607.00							
	Adhoc % as per 2017-18 SR	66.77							
		673.77							
	Area Weightage @ 6%	40.43							
	Total Rate	714.20							
4	Cutting of road surface for pipeline trenches and disposing of the excavated stuff as directed including barricading, danger lighting etc., in the **Asphalt surface road. (P.264/37.38 2016-17 BLORE CIRCLE PWD SR)**							Cum	
	70% Pipe length of Item no.2		1	2763.60	0.30	0.15	124.36	400.04	49750
	Basic Rate	340.00							
	Adhoc % as per 2017-18 SR	37.40							
		377.40							
	Area Weightage @ 6%	22.64							
	Total Rate	400.04							
5	**Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes** conforming to IS 15778 having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes jointing of pipes and fittings with one step solvent cement, trenching, refilling & testing of joints complete. (external work). - **50mm nominal OD pipes (P.97/13.87.6 2016-17 BLORE CIRCLE PWD SR)**							mtr	
		mtr	1	3948.00			3948.00	529.47	2090348
	Basic Rate	450.00							
	Adhoc % as per 2017-18 SR	49.50							
		499.50							
	Area Weightage @ 6%	29.97							
	Total Rate	529.47							
6	**Providing and fixing gun metal wheel valve** conforming to IS specification of approved make as per directions including all lead and lift etc., complete.- for 50mm dia **(P.94/13.79.6 2016-17 BLORE CIRCLE PWD SR)**							Nos	
		Nos	30				30	1694.30	50829
	Basic Rate	1440.00							
	Adhoc % as per 2017-18 SR	158.40							
		1598.40							
	Area Weightage @ 6%	95.90							
	Total Rate	1694.30							
7	**Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes** conforming to IS 15778 having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes jointing of pipes and fittings with one step solvent cement, trenching, refilling & testing of joints complete. (external work) - **32mm nominal CD pipes (P.97/13.87.4 2016-17 BLORE CIRCLE PWD SR)**							mtr	
	Proposed Distribution Line 32mm Dia line - Each House Connection		494	2.10			1036.35		
							1036.35	252.97	262164
	Basic Rate	215.00							
	Adhoc % as per 2017-18 SR	23.65							
		238.65							
	Area Weightage @ 6%	14.32							
	Total Rate	252.97							

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Sl. No.	Description of Item	Unit	No	L	B	D	QTY	Rate	AMT
8	Providing and constructing burnt brick masonry with approved quality of modular bricks of standard size of class designation 7.5Newton per sqmm (Machine moulded Wirecut bricks) with cement mortar 1:6 for basement and superstructure including cost of materials, labour charges, scaffolding, curing complete as per specifications. (P.28/6.20 2016-17 BLORE CIRCLE PWD SR)							Cum	
	Chambers for Gate Valve Operation	30	4	0.45	0.23	0.30	3.73		
							3.73	12191.93	45476
	Basic Rate	10362.00							
	Adhoc % as per 2017-18 SR	1139.82							
		11501.82							
	Area Weightage @ 6%	690.11							
	Total Rate	12191.93							
9	Providing and fixing in position Bib Cock of approved quality 25mm nominal bore - NP including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. (Sl.No.620/Page-XXI 2016-17 BLORE CIRCLE PWD SR)							Nos	
			1	494			493.5	252.97	124840
	Basic Rate	215.00							
	Adhoc % as per 2017-18 SR	23.65							
		238.65							
	Area Weightage @ 6%	14.32							
	Total Rate	252.97							
10	Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications. (P.6/2.11 2016-17 BLORE CIRCLE PWD SR)							Cum	
	Excavated trench portion		1	3948.00	0.30	0.50	592.20		
							592.20	89.42	52955
	Basic Rate	76.00							
	Adhoc % as per 2017-18 SR	8.36							
		84.36							
	Area Weightage @ 6%	5.06							
	Total Rate	89.42							
11	KSRRB M100-4.1. Cost of Haulage Excluding Loading and Unloading KSRRB M100-1 : Placing tipper at loading point, loading with front end loader,dumping, turning for return trip, excluding time for haulage and return trip complete as per specifications. Haulage Distance - 10km's PWD SR 2016-17 VIDE SL.NO.17.1 & 17.4 PAGE NO.134							Cum	
	Quantity vide Item no.1						1974.00		
	50% Quantity vide Item no.2						421.95		
						Quantity =	2395.95	~~117.66~~ 111.00	~~281907~~ 265950.00
	Basic Rate	100.00							
	Adhoc % as per 2017-18 SR	11.00							
		111.00							
	Area Weightage @ 6%	~~6.66~~							
	Total Rate	~~117.66~~							3772348
									~~3788305~~
	Miscellaneous & Other								~~1695~~ 17652
								Total Rs.	3790000

CERTIFICATE:

1. The work spot has been inspected and found to be necessary
2. The work spot comes under BBMP Limits
3. The provisions made in the estimate are necessary and minimum
4. The estimate is based on PW,P & IWTD B'luru SR 2016-17

Assistant Engineer
Ward-16
BBMP

Executive Engineer
RRN Division
BBMP

Assistant Executive Engineer
Yeshwanthpur Sub-Division
BBMP

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BRUHAT BENGALURU MAHANAGARA PALIKE

Rajarajeshwari Nagara Division

Name of Work :- Drilling of Borewell, erecting the pump and motor , electrification and pipeline for areas in Jalahalli Ward No.16

							Estimate Cost Rs.	2450000.00
	DESCRIPTION OF WORK	UNIT	NO	L	B	D	QTY	RATE	AMOUNT
	2	3	4	5	6	7	8	9	10
1	Geophysical investigation of site for sinking bore well for supply drinking water to the habitation either through the Hand Pump. MWS or PWSS by vertical electrical sounding by adopting Venner or schlumberger's method, including reconnaissance survey of geological formation, Geophysical investigation of existing ground infecundity its quality & acceptability of the users indicating the location of site, recommended depth of casing pipe required to seal the top in consolidated formation of proper scatting of casing pipe ,depth of drilling required to cover full depth of auquifer propopsed to be tapped Proboabale yield and other information required including transporetation technical personal and labour etc (PRED SR 2012-13P 47 I 9.4								
		Each	1	1			1	1882.00	1882.00
2	Sinking of borewell of 165mm dia clear using super fast hydraulic rig of capacity 250 PSIG and above 900 CMF and above in all strata including over burden upto 20m, fixing of casing pipes, collars and cap with necessary welding, cutting and treading including transportation of rig and supporting vehicles, screw charges and cost of consumables, etc.. complete including yield testing at the final depth with a minimum working of compressor for one hour.(excluding cost of casing pipes, collars, caps etc.,)(PRED SR 2012-13 P 47 I 9.1								
	a) 0.00 to 50.00 mts	Rmt	1	1	50.00		50.00	306.00	15300.00
	b) 50.00 to 100.00 mts	Rmt	1	1	50.00		50.00	400.00	20000.00
	c) 100.00 to 150.00 mts	Rmt	1	1	50.00		50.00	445.00	22250.00
	d) 150.00 to 200.00 mts	Rmt	1	1	50.00		50.00	470.00	23500.00
	e) 200.00 to 250.00 mts	Rmt	1	1	50.00		50.00	544.00	27200.00
	e) 250.00 to300.00 mts	Rmt	1	1	50.00		50.00	622.00	31100.00
	e) 300.00 to366.00 mts(	Rmt	1	1	66.00		66.00	658.00	43428.00
3	Supply of ISI mark 175 mm nominal bore,plain end steel casing pipe grade of steel fee 410 of wall thickness 5.4mm thick confirming to IS 4270:2001 and latest amendments, eletric resistence welded steel tube material and confirming to IS 1387/1993 and manufactured by basic open hearth electric or basic oxygen process in random length of 5 to 7 mts. Both ends threaded confirming to IS 554/1985, one end fixed with socket conforming to IS 4270:2001 and the other end with screwed pipes. All pipes shall be reasonably free from defects. The tubes shall be reasonably straight should be with ISI marking, weighing 25.10Kg/mtr (inclusive of all taxes and duties). Prices including collar medium duty.(RDED SR 2012-13 P-iii, I-84)								
	a) Casing pipe	Rmt	1	1	25.00		25.00	1325.00	33125.00
4	PVC Pipe 10kg/Sqm 250mm outer dia (PW,P &IWTD 16-17) P XXXIII Sl NO.3008								
		Each	1	12			12	2600.00	31200.00
5	Supply of 175mm MS Cap. (RDED SR 2012-13 P-iii, I-85)								

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	Each	1	1			1	100.00	100.00
Supply and Deliver at site Brand new CRI/Texmo/Atlant/Luby/Suguna make or Equalant ISI Make Suitable forvertical instalation in 150mm dia bore wella comprising of single stage or multistage CF pump closed by mens of stainless steel coupling to suitable HP, suitable speed totaly enclosed and fitted with pure drinking water (wet type) squirral cage submersible indextion motor suitable for operation of 30PH 50HZ 380/440 Volts AC supply fitted with required accesseries, and gouard non return valve, ect,. Complete the Pump and motor shall form an integral unit with all the required fitting 15HP/30Stage (including VAT) with all lead and left and as per directiong of the Engineer incharge of work (PW,O & IWTD 16-17P No XXXXIII)								
15.00HP/30Stage Sub mersible pump set	No	1	1			1	70600.00	70600.00
Providing and fixing to wall, ceiling and floor galvanised / mild steel tube 50mm nominal bore with fittings (medium grade weight 1.27 Kg/mtr) B class including cost of all materials, labour charges, HOM of equipment and testing complete as per specifications. Specification No. KBS 13.2.14/13.8 (P-94, It-13.15, PWD SR:2016-17)	Rmt	1	1	270		270.00	432.00	116640.00
Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper conductor cofirming to table 3 class 5 to IS 8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto 1100 volts with specified IS 694:1990 and confirming to the attwached GTP of Group A 3C x 6.0 Sq.mm PWD Ele SR 2014-15 Pa no.12 Sl nO.2.11.4	Mtr	1	2	293.00		586.00	163.50	95811.00
Erection of pumpset including aligning and balancing with all necessary erection materials and labour including supply and erection of one pair of supporting clams, borewell cap, cable clips with bolts, nuts, valve gauges etc., involved in the job. (Necessary G.I.Pipe and specials will be supplied by the board at the site free of cost)(CE (M) BWSSB, Letter No.BWSSB/CE(M)ACE(M)-III/TA-8/9194/2008-09 dated 21/1/09) (PRED SR 2012-13 P 56 I 10.3.10, 10.3.20, 10.3.21, 10.3.22(550+950+850+650=3000)	No	1	1			1	3000.00	3000.00
10 Supplying and fixing 50mm heavy duty GI (Hose)Collars. (PWD SR 2016-17, P-XXXIX)	Nos	1	45			45	103.00	4635.00
11 Providing and fixing in position 50mm Nominal bore non- return valve vertical type of approved make including cost of all materials, labour and HOM of equipment with all leads compleate as per specification.(PWD SR 16-17, P-93, It-13.55)	Nos	1	1			1	1496.00	1496.00
12 Supplying and fixing 50mm GI Union.(PWD SR 2016-17, P-XXXVII)	Nos	1	2			2	223.70	447.00

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	Supplying and fully atutomatic star-delta unit push button type with suitable wires, 3 contactosr, one adjustable thermal timer mounted on a common base late held in steel enclosure for use on 440/440 volts 3 phase and wired after to the existing wooden board for motor 15.0 HP Ele SR 2014-15 Pg No.44 Sl No.6.2.2							
		Nos	1	1			1	8273.00	8273.00
	Erection of single phase preventor ammeters/ including fixing selector switch/ current operated earth leakage circuit breakers voltage oerated earth leakage circuit breakers voltage operated circuit breaker/ above 100A fuse channel set (3 Nos) HRC fuses above 100A (3 Nos) including wiring using suitable capacity wires, bolts, nuts, screws etc, including transportation charges from stores to spotEIc Sr 2014-15 (P-109, It. No.17.1)							
		Nos	1	1			1	157.00	157.00
	Fabricating, supplying and mounting 1200x900x350 mm MS box made out of 18 SWG suitable for floor/ wall mounting, fully weather proof with double stanted top as per drawing with provision for better heat dissipation provided with hinged front cover with clear clamped to the door on EB meter side to facilitate meter reading, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with approved colour enameled metal plant etc, complete box of 36200 Sqcm, @ Rs.0.20 18 SWG (BWSSB SR P-352, It No.41)							
		Nos	1	1			1	7866.00	7866.00
	Supplying and fixing miniature circuit breakers/isolators on existing MCB distribution boards using necessary fixing materials and wiring complete as required - 40 to 63 amps triple pole Ele SR 14-15 P-47, It No.6.16.2)							
		Nos	1	1			1	677.00	677.00
	Supplying andrunning of GI copper strip or grounding connection using necessary fixing material required 600x600c3mm GI plate Ele Sr 2014-15 (P-55, Sl no.7.3.5							
		Nos	1	1			1	784.00	784.00
	Supplying and fixing Porcelain fuse channel with cut out on the existing wooden /panel using necessary nuts bolts and washer etc., complete....(P-No.44 ,I.No.6.7.1 KPWD Ele SR 2010-11,							
		Nos	1	3			3	120.00	360.00
	Providing and fixing in position brass gate valve with C.I. Wheel of approved quality (screwed end) 50mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete s per specifications. Specification No.KBS 13.2.6/ 13.3 (PWD SR 2016-17 P-92, It.No.13.37)							
		Nos	1	1			1	2052.00	2052.00
	Supplying and laying of L.T.U.G cable having aluminium conductor PVC insulated shethed galvanised steel wire/steel tape armoured cable with PVC outer sheathing 1.1 KV class 4 core 16 Sqmm PVC cable (KPWD Elec SR 2014-15 Pg no.55 sl no.7.4.4							
		Mtr	1	1	12.00		12.00	140.40	1684.00

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	Labour charges for Laying of 1.1 KV Class UG cable 6 Sqmm to 16 sqmm (KPWD SR 2014-15 Pg no.61 sl no.7.8.1								
		Mts	1	1	12.00		12.00	10.80	129.00
23	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating in Hard soil etc., complete. complete as per specifications and direction of the Engineer-in-Charge (KPWD Electrical SR 2014-15 Pg no.62 sl no.7.9.1								
		Mtr	1	1	20.00		20.00	78.00	1560.00
24	Supplying and fixing Class-A (Medium duty) -GI pipe wall thickness not less than 3.25mm on pole/wall/Drain crossing with necessary clamping arrangements for UG Cable of 1.1 KV class 65mm (KPWD Ele SR 2014-15 Pg no.62 sl no.7.12.3								
		Mtr	1	1	10.00		10.00	585.00	5850.00
25	Supplying and fixing LT cast iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen / insulating compound complete. With terminals, clamps, bolts nuts and washers etc.complete for 16 Sqmm as per specification (KPWD Ele SR Pg no.62 sl no.7.13.2								
		Each	1	1			1	280.00	280.00
				pipe line					
	Earthwork excavation for foundation of buildings, culverts, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in Hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches,stacking the excavated soil clear from edges of excavation with lead upto 50 m.after breaking of clods complete as per specification.spacification. No.KBS 2.1(b) / 2.3.5(PWD SR 2016-17, P-5, It -2.4)								
	for Pipe line		1	35.0	0.60	0.75	15.75		
		Cum				Total	15.75	305.64	4813.00
	Basic Rate:	283.00							
	A.W.@. 8%	22.64							
	Total	**305.64**							
	Providing and Installing at site work P.V.C Including cost of pipe and specials and Labour, including lowering into trenches, laying true to line level and perfect linking at joints leak proof including jointing of approved type with all labour and lift charges, handling charges including encasing the pipe allround to a depth not less than 15cms with gravel or selected earth available from the excavation etc., Complete, PVC pipes 63mmdia of 6kg/cm2 PRED SR Page NO.15,item nO.3.4.2								
	63mm outer dia		1	35.0			35.00		
		Mts				Total	35.00	112.00	3920.00
	KSRB 2-4 : Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specificifictions.(PWD SR 2016-17 P-6, It -2.11)								
	75% Qty vide item No 31	Cum				Total	11.81	80.56	951.00
	Basic Rate:	76.00							
	A.W.@. 8%	4.56							
	Total	**80.56**							

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BESCOM charges & KEB Deposit								
	Nos	1	1			1	25000.00	25000.00
					For 1 Nos Borewell		TOTAL	606670.00
					For 4nos Borwells(4X606670)		TOTAL	2426680.00
					Miscellaneous			23320.00
							Total Rs.	2450000.00

CERTIFICATE:

1. The work spot has been inspected and found to be necessary
2. The work spot comes under BBMP Limits
3. The provisions made in the estimate are necessary and minimum
4. The estimate is based on ESR-2014-15 & PW,P & IWTD B'luru SR 2016-17

Assistant Engineer
Ward-17
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